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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,958	02/20/2004	Robert S. Whitehouse	14074-007001	4826
26161	7590	04/07/2006	EXAMINER	
FISH & RICHARDSON PC P.O. BOX 1022 MINNEAPOLIS, MN 55440-1022			RAZA, SAIRA B	
			ART UNIT	PAPER NUMBER
			1711	

DATE MAILED: 04/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

C1

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/783,958	WHITEHOUSE, ROBERT S.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Saira Raza	1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on February 3, 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-75 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-75 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                    |                                                                             |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                | Paper No(s)/Mail Date. _____                                                |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>Feb 3, 2006</u>                                                           | 6) <input type="checkbox"/> Other: _____                                    |

### DETAILED ACTION

The rejections have been altered to reflect the amended claims.

#### *Claim Rejections - 35 USC § 102*

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1-16, 20-36, 40-46, 48-55, 57-71, and 74-75 are rejected under 35 U.S.C. 102(b) as being anticipated by 3M. 3M (WO 96/05264) can be found on the applicant's Form PTO-1449.
3. 3M discloses adhesives comprising polyhydroxyorganoates having a  $T_g$  less than 20 °C (abstract). The adhesives have open times of at least 7 days (p. 6 lines 6-15) and include mixtures of two PHA compounds (p. 6 lines 16-21). Since the ranges are both open to those values near the endpoints, it is the examiner's position that the preferred  $T_g$  values of "about -5 °C" overlaps the claimed "about -10 °C" (p. 7 lines 13-21). This passage also suggests weight average molecular weights of preferably at least 100,000. The PHA contains at least one 3-hydroxybutyrate monomer (General Formula I, where R = 1 carbon atom). Additives, including those claimed are used in amounts as little as 0.1% by weight (p. 14 lines 1-7). The exemplified polymers have polydispersities up to 3.03 (PHO/U). Examples teach dissolving the polymers in organic solvent, where the solvent is evaporated. Thus, the reference suggests the claimed composition having less than 1% by weight of solvent. The examples and testing procedures also teach steps of contacting the composition to a substrate, of pressing the PHA between two surfaces, and of separating the surfaces.
4. Thus, the reference teaches the claimed open time, solvent,  $T_g$ , molecular weight, PHA blend, and polydispersity. Although the reference teaches a high peel strength, the reference does not teach the same bond strength in the claimed units (tables). Also, although the reference suggests that the polymers have low crystallinity, no percent is given (p. 7 lines 6-12). However, since the

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materials used in the invention are the same as those found suitable by the applicant for the invention, and because the polymers and compositions have the claimed molecular weight,  $T_g$ , polydispersity, and open time claimed by the applicant, it is the examiner's position that the polymers and compositions would inherently possess the claimed crystallinity, surface tack time, and peel bond strength.

***Claim Rejections - 35 USC § 103***

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 37-39, 47, 56, and 72-73 are rejected under 35 U.S.C. 103(a) as being unpatentable over 3M.

7. 3M applies as above, suggesting that blends of PHA polymers be used but failing to exemplify blends having different molecular weights. However, it is noted that a blend of two of any of the exemplified polymers would have a weight average molecular weight difference of at least 1,000, and a blend of the higher molecular weight materials with either of the lower molecular weight materials would have a difference of 50,000. It is the examiner's position that it would have been prima facie obvious to blend the exemplified materials with the expectancy of forming adhesives of equally improved adhesive properties. The reference also teaches lower molecular weight materials (as low as 30,000 (p. 7 lines 16-21)). It is the examiner's position that it would have been prima facie obvious to use a lower molecular weight material with one of the exemplified higher molecular weight materials (having a difference of 100,000) to produce a blend of lower viscosity.

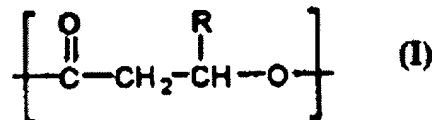
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8. Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over 3M in view of Procter & Gamble. Procter & Gamble (WO 97/04036) can be found on the applicant's Form PTO-1449.

9. 3M applies as above, teaching chloroform solvents but failing to teach aqueous solvents or aqueous mixtures. Procter & Gamble teaches PHA adhesives for non-woven substrates, where mixtures of organic solvents, including chloroform, and water are used to form dispersions (abstract; p. 16, line 1-p. 17 line 6). Because water is included, the adhesives are more environmentally friendly. Therefore, it is the examiner's position that it would have been prima facie obvious to use mixtures of immiscible organic solvents and water in the adhesives of the 3M invention to form environmentally-friendly adhesive dispersions.

#### *Response to Arguments*

10. Applicant's arguments filed February 3, 2006 have been fully considered but they are not persuasive. Applicant argues that the 3M reference does not disclose or suggest compositions including PHA containing at least one 3-hydroxybutyrate monomer. Applicant is directed to the monomeric unit of PHA, General Formula I (below), in the 3M publication, wherein the R group can have 1-3 carbon atoms.



When R = 1 carbon atom (methyl), the resulting monomeric unit represents 3-hydroxybutyrate.

11. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion,

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or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the suggestion to combine the 3M reference with the P&G reference is to form environmentally-friendly adhesive dispersions.

### ***Conclusion***

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Saira Raza whose telephone number is (571) 272-3553. The examiner can normally be reached on Monday-Friday from 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



IRINA ZEMEL  
PRIMARY EXAMINER